



Launch Mission Execution Forecast

Mission: Falcon 9 NASA Crew-4

Issued: 24 Apr 2022 / 0900L (1300Z)

Valid: 27 Apr 2022 / 0347 - 0357L (0747 - 0757Z)



Forecast Discussion: Breezy onshore flow along with occasional onshore moving Atlantic showers will continue across the Spaceport through early next week as an area of high pressure across the western Atlantic gradually sinks south. The next frontal boundary will move across the southeastern US on Tuesday, slowly dropping into Central Florida Wednesday and Thursday. This boundary will bring increasing clouds and chances for rain, especially on Thursday. The boundary is expected to be south of the area to end the week, with dry conditions as high pressure settles just to the east of the area. Only a few onshore moving clouds are expected for the Friday morning launch opportunity. The main weather concerns for each launch attempt will be the Cumulus Cloud Rule and Flight Through Precipitation.

Launch Day	Probability of Violating Weather Constraints ¹							
	10%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation						
	Weather Conditions					Additional Risk Criteria ²		
	Weather:	Isolated Showers	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Visibility:	7 miles	Cumulus	Scattered	3,500	8,000	Ascent Corridor Recovery:	Low
24-Hour Delay	Temp/Humidity:	70°F / 90%					Booster Recovery Weather:	Low
	Liftoff Winds (200'):	180° 12 - 17 mph					Solar Activity:	Low
	Probability of Violating Weather Constraints							
	60%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation						
	Weather Conditions					Additional Risk Criteria		
48-Hour Delay	Weather:	Scattered Showers	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Visibility:	7 miles	Cumulus	Scattered	3,500	8,000	Ascent Corridor Recovery:	Low-Mod
	Temp/Humidity:	65°F / 70%	Altostratus	Scattered	10,000	12,000	Booster Recovery Weather:	Low
	Liftoff Winds (200'):	040° 12 - 17 mph	Cirrostratus	Broken	20,000	25,000	Solar Activity:	Low
	Probability of Violating Weather Constraints							
Notes	20%	Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation						
	Weather Conditions					Additional Risk Criteria		
	Weather:	Isolated Showers	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Visibility:	7 miles	Cumulus	Scattered	3,500	10,000	Ascent Corridor Recovery:	Low-Mod
	Temp/Humidity:	68°F / 80%					Booster Recovery Weather:	Low
Liftoff Winds (200'):	060° 7 - 12 mph					Solar Activity:	Low	
<div>1. The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime during the launch window.</div> <div>2. Additional Risk Criteria, which are not included in the PoV, are mission-specific constraints that may not include all phenomena within each risk factor.</div> <div>See https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf for more information</div>								

Next Forecast Will Be Issued 25 Apr 2022